CULTURAL RESOURCES SURVEY OF THE SCWSA WATER PLANT SITE NO. 6, SALUDA COUNTY, SOUTH CAROLINA

Prepared By:
Michael Trinkley, Ph.D.
and
Nicole Southerland

Prepared For:
Mr. David DePratter
HSMM
PO Box 2646
Spartanburg, SC 29304

CHICORA RESEARCH CONTRIBUTION 367

Chicora Foundation, Inc.
PO Box 8664
Columbia, SC 29202-8664
803/787-6910
Email:chicora@bellsouth.net
www.chicora.org

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ABSTRACT

This report provides the results of a cultural resources investigation of 22 acres of land and approximately 2.6 miles of roadway, situated in northeastern Saluda County. The study was conducted by Dr. Michael Trinkley of Chicora Foundation for Mr. David DePratter of HSMM and is intended to assist the Saluda County Water & Sewer Authority comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract is to be used by the Saluda County Water & Sewer Authority for the placement of a water treatment plant for Lake Murray. The survey area is located about 1.5 miles south of Lake Murray on S-400 or Shealy Road. The road right-of-way is to be used for the placement of a raw water intake line and a finished water line which connects to the water treatment plant.

This survey was conducted to identify and assess archaeological and historical sites which may be in the project area. The proposed undertaking will require clearing, grubbing, grading, and the construction of the plant, access roads, and associated facilities. There will likely be short-term construction impacts along with long-term impacts such as increased traffic associated with the facility. These actions have the potential to damage or destroy archaeological sites in the vicinity.

Consultation with the S.C. Department of Archives and History revealed no properties in or near the project area that have been determined eligible for the National Register of Historic Places.

An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology also failed to identify any sites.

The archaeological survey of the tract incorporated shovel testing at 100-foot intervals along transects placed at 100-foot intervals along the roadway running east-west through the project area. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 108 shovel tests were excavated along 21 transects. The placement of the water lines were along existing road right-of-ways which have already been heavily disturbed. Three shovel tests were placed along the wooded portion of the right-of-way from the lines connection with Murray, running south.

As a result of these investigations no archaeological sites were found. The topography is very sloped with no definitive ridge top, making it less likely to find any archaeological remains.

A survey of public roads within 1.0 mile of the proposed undertaking was conducted in an effort to identify any architectural sites over 50 years old which also retained their integrity. No such structures were found.

It is possible that archaeological remains may be encountered in the project area during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. David DePratter of HSMM. The work was conducted to assist the Saluda County Water & Sewer Authority comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project site consists of a 22 acre tract and approximately 2.6 miles of road right-of-ways proposed to be used for the construction of a water treatment facility and water lines located in northeastern Saluda County (Figure 1). The survey area has very sloping topography and some low wetland areas (Figure 2). A roadway is located within the tract making access easy.

The tract consists of steep ridge side slopes and no dominate ridges. The survey encountered mostly pines and hardwoods, but some low wetland areas were also seen within the tract. The surrounding area still remains rural, but development is occurring fairly rapidly due to the proximity to Lake Murray.

The tract, as previously mentioned, is intended to be used for construction of a water treatment plant. This work will require the construction of the facility as well as an expanded road system when development begins. Construction will also involve activities associated with water treatment systems. There will likely be increased short-term noise, traffic, and dust levels associated with the project. These activities have the potential to cause extensive damage to any archaeological resources which may be present on the tract.

The water lines will involve the excavation of the area next to the road, which will have short-term effects such as an increase in noise and dust levels, but since the line will be buried, the long-term effects will be limited maintenance if the line should need it.

This study, however, does not consider any future secondary impact of the project, including increased or expanded development of this portion of Saluda County.

We were requested by Mr. David DePratter of HSMM to provide a proposal for the survey on July 15, 2002. This proposal was sent on July 17. Investigations started shortly thereafter.

Initial background investigations incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology by Chicora Foundation. As a result of that work, no sites were identified within the 1.0 mile APE.

In addition, the South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No sites were found, but no comprehensive architectural survey has been performed for the county.

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files.

The archaeological survey was conducted on September 17 by Mr. Tom Covington and Ms. Nicole Southerland. The architectural survey of the project APE was conducted at the same time. Report production was conducted at Chicora's laboratories in Columbia, South Carolina from September 20-23.

This report details the investigation of the project area undertaken by Chicora Foundation and the results of that investigation.

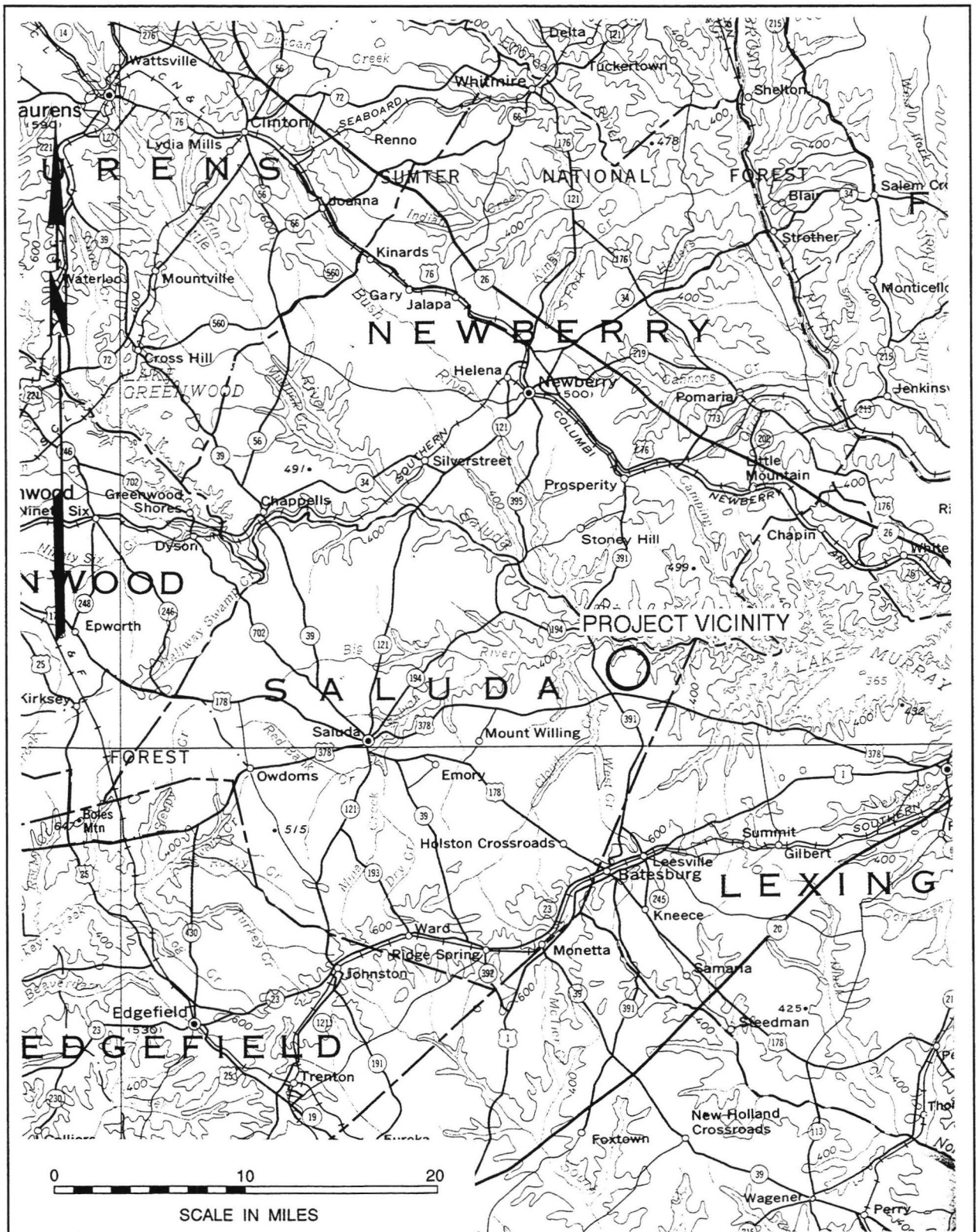

Figure 1. Project vicinity in Saluda County (basemap is USGS South Carolina 1:500,000).

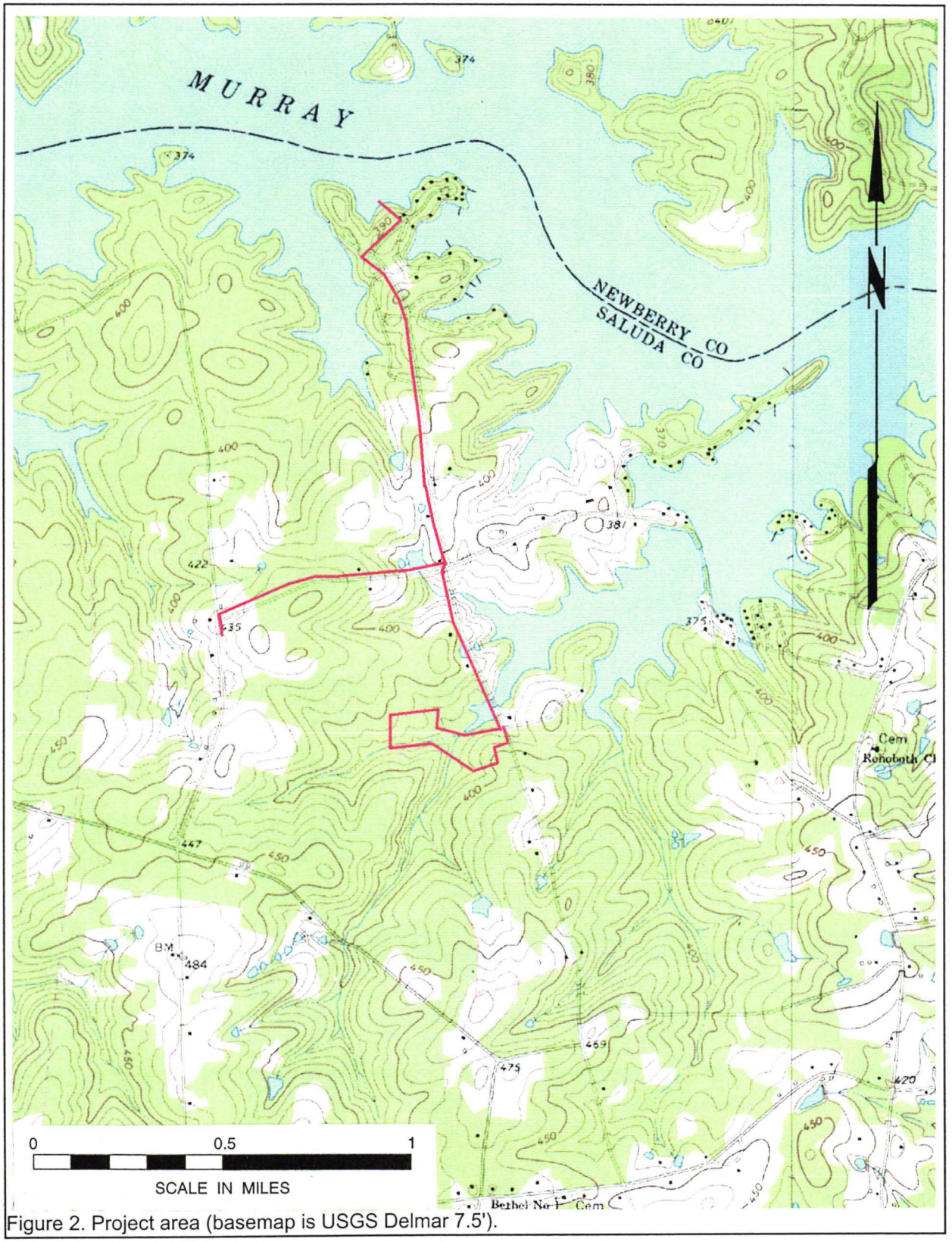

Figure 2. Project area (basemap is USGS Delmar 7.5').

NATURAL ENVIRONMENT

Physiographic Province

Saluda County, situated in the approximate center of South Carolina, is bounded to the southeast by Lexington and Aiken Counties, to the west by Edgefield County, to the northwest by Greenwood County, and to the north by Newberry County.

The project area falls entirely into the Piedmont, which separates the Appalachian Mountains from the Atlantic Coastal Plain. Physiographically, the area is a thoroughly dissected plain. The relief ranges from nearly level to steep, but it is dominantly gently sloping to moderately steep. Although throughout the Piedmont area the elevations range from 450 feet above mean sea level (AMSL) to 1,014 feet AMSL, the elevations in the project area range around 370 to 400 feet and the terrain is characterized by steep topography.

The drainages form a dendritic pattern and throughout the Piedmont this terrain has been extensively dissected and degraded. The Saluda River and its tributaries drain the county.

Two of the more interesting features concerning this area, which served to promote the nineteenth century development of Dreher Shoals as a mill site, was its straight channel and fast flowing water. In fact, Joffre Coe (1964:11) identified this particular setting as conducive to the preservation of archaeological sites. He observed that in such areas where the rivers fall rapidly, their beds are cut narrow and the water flow at a high velocity. In places there are "narrows," where projecting fingers of resistant rock extent into the floodplain. He observed that, "behind these projecting rocks the river forms large eddies when it is in flood and deposits sand and silt at a faster rate than elsewhere along the narrow floodplains (Coe 1964:11). It is in these locations that sites can become buried.

It is also in these areas, during the early twentieth century, that a series of hydroelectric dams and power plants were established. In fact, it was about 4 miles above the Doerschuk Site in North Carolina that the Narrows Dam was constructed by the Aluminum Company of America (now Alcoa) in 1917. At that time its

Figure 3. View of pines and hardwoods on the survey tract.

power head of 179 feet was the highest in the South. It was only a few years later that research found a dam at Dreher Shoals — today called Saluda Dam (in Lexington County to the east) — could provide a power head of 185 feet.

So not only do areas such as this provide close contact with a wide range of physiographic regions and resources important to prehistoric occupants, but there is also a potential that early sites will be preserved. This is documented by the presence of 38LX338 about 2 miles downstream from the Saluda or Lake Murray Dam. This site also reveals another feature of importance. While the area for thousands of years evidenced more deposition than erosion, two factors seem to have changed this process. The construction of dams, such as the Saluda Dam, controlled flooding and minimized the potential for deposition, while at the same time, erosive cultivation practices continued with great intensity. As a result, 38LX338 appears to be have been extensively damaged, with plowing going into the subsoil so that today there are only remnant areas of that previous deposition.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Hasselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia into Georgia. This area, called the Slate Belt, is characterized by slightly lower ground with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1970), as well as prehistoric occupation (see Coe 1964). In Saluda County many of the Piedmont soils, such as the Nason-Georgeville unit, are weathered from argillites rich in silica and alumina. Other soils are formed in saprolite that weathered from crystalline rocks and "Carolina slates". Soils from the river floodplains formed in sediment that washed from the uplands of the Piedmont province.

Camp et al. (1958) identifies only two soil series, Herndon silt loams and Georgeville silt loams, in the project area along with a small portion of mixed alluvial soils. Found most often within the tract, Georgeville soils have an A horizon of very dark grayish brown (10YR3/2) silt loam for about 1.0 inch over a dark brown (7.5YR4/4) silt loam to a depth of 0.4 foot. A four inch layer of brown (7.5YR5/4) silt loam is situated beneath these layers. The subsurface consists of a red (2.5YR5/8) silty clay loam with occurs to a depth of 1.3 feet. Due to the steeply sloping topography in the survey area, the top two layers had been eroded, generally leaving the brown (7.5YR5/4) at the surface.

Herndon silt loams have an A horizon of very dark grayish brown (2.5Y3/2) silt loam to a depth of 0.1 foot over a pale-olive (5Y6/4) silt loam to a depth of 0.8 foot. The subsoil consists of a pale yellow (2.5Y7/4) silty clay loam. The slopes in the survey area range from 2 to 10%, which has caused a significant amount of erosion by removing the top very dark grayish brown (2.5Y3/2) silt loam layer.

The small amounts of mixed alluvial land found within the tract were found near a small creekbed which was dry at the time of the survey. These soils are generally formed from soils that have been washed upstream (Camp et al. 1958).

The 1934 South Carolina Erosion Survey by M.W. Lowry (1934) found that all of the south side of the Saluda River exhibited moderate sheet erosion and occasional gullies, as did much of the area on the north side of the Saluda. There was, however, an area of the survey tract that was classified as having severe sheet erosion with frequent gullies — evidence that erosion throughout the tract was significant by the early 1930s.

Trimble's study of erosion in the Southern Piedmont shows that this area of Saluda County lost up to 1.1 foot of soil through erosion in the nineteenth and early twentieth centuries (Trimble 1974:3). It is also part of the area classified by Trimble as having high antebellum erosion land use with postbellum continuation and belonging to his Region III — the Cotton Plantation Area (Trimble 1974:15).

Climate

Elevation, latitude, and distance from the


Figure 4. 'Dry' creek bed located on the survey tract.

coast work together to affect the climate of South Carolina, including the Piedmont. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont.

Consequently, the climate of Saluda County is temperate. The winters are relatively mild and the summers hot and humid. The average temperature for the year is about 63°F. Rainfall in the amount of about 47 inches is adequate.

The average growing season is about 211 days, with the latest frosts occurring in April and the earliest frosts in October (Camp et al. 1958:97). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established by Braun (1950). Regardless, the potential natural vegetation of the project area is the Oak-Hickory-Pine forest, composed of medium tall to tall forests of broadlead deciduous and needleleaf evergreen trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak. In actuality, the Piedmont is composed of a patchwork of open fields, pine woodlots, hardwood stands, mixed stands, and second growth fields. Shelford (1963) includes the Carolina Piedmont in the Oak-Hickory zone of the Southern Temperate Deciduous Forest Biome.

Today little of the study tract exhibits anything resembling these original forests. Years of cultivation followed by logging activities have rendered most of the area eroded and supporting a relatively limited forest of pines with mixed hardwoods.

Prehistoric Environment

A reconstruction of paleo-environmental features has gradually emerged within the past several decades and is based on the work of Whitehead (1965, 1967, 1972, 1973) and Watts (1970, 1975, 1980). Unfortunately, our understanding of environmental change is general and is based almost entirely on pollen analysis of lake sediments and buried organic layers situated in Piedmont areas outside South Carolina. The pollen studies give evidence of vegetational changes which in turn provide suggestions concerning climatic change. These studies can be important to the archaeologist because they allow inferences to be drawn on the nature of the

cultural-environmental inter-actions, such as the adaptive shifts human populations made to counter ecological shifts. It is recognized that these inferences must be based on the paleoenvironment, not the extant environment.

Based largely on work from southeastern Virginia and North Carolina, Whitehead (1965) has employed a tripartite division of the preceding 25,000 years: Full Glacial (25,000 - 15,000 B.P.), Late Glacial (15,000 - 10,000 B.P.), and Post-Glacial or Holocene (10,000 B.P. - present).

During the Full Glacial the Coastal Plain was boreal, although the vegetation was sparse, which suggests a relatively dry climate. Voorhies (1974), based on a paleontological assemblage from east-central Georgia, suggests a cool, moist climate instead. Watts' (1980) work from White Pond at the edge of the Inner Coastal Plain, found jack pine, red spruce, and herbs, which appear to reflect a boreal forest climate. During the Late Glacial period there was a gradual change to a hemlock-northern hardwoods forest type and eventually to a modern condition. From White Pond, Watts (1980) identified a forest dominated by oak, hickory, beech, and ironwood and interprets this assemblage as a mesic deciduous forest typical of a cool and moist environment.

The mesic deciduous forest began to change early in the Holocene and was replaced by a more xeric forest comprised of modern flora. Again from White Pond, Watts (1980) notes the rapid loss of hickory, beech, and ironwood after 9,500 B.P. with the equally rapid rise of southern pine species. The oak species remain, and sweet gum and tupelo are found. For a brief synopsis of the environmental changes occurring around 10,000 B.P. the discussion by Anderson and O'Steen (1992:3) is particularly useful, especially since it recognizes the different zones within South Carolina.

An essentially modern flora is postulated by Whitehead (1965) and Watts (1971) by 5,000 B.P. with the spread of oak-hickory forests. But this, however, fails to recognize the extraordinary importance of the changes occurring during this period. As Sassaman and Anderson note:

> the period of mid-Holocene global warming referred to variously as the Altithermal, Hypsithermal, and Climatic Optimum *is* the Middle Archaic Period, as its effects on vegetation and fauna are considered to be so dramatic that they completely reconfigured patterns of human settlement, subsistence, social relations, and technology (Sassaman and Anderson 1994:6).

Unfortunately, as Sassaman and Anderson note, there are relatively few data available for South Carolina and the situation, even now, is far from clear. In fact, while there are mounting data arguing for dramatic changes in the American Midwest, the evidence from the Southeast is, at best, ambiguous. Sassaman and Anderson (1994:7-12) review the available data without arriving at any widely accepted consensus.

When the palynological data are explored, there is evidence that pines advanced in the Coastal Plain, but may have been held back, at least to some degree, in the Piedmont. This spread of pine, it seems, may be associated with the shift of Middle Archaic populations into the upper portions of the state, or at least helped focus attention on "oases of hydric and mesic communities" (Sassaman and Anderson 1994:10).

If geological and soils evidence is examined, there seem to be two focused camps — those arguing that in general South Carolina was fairly moist and those who see cycles of limited moisture followed by chronic dry conditions. Although there are too few data to support one proposition over the other, acceptance of cycling might help explain a broad range of site conditions. Erosion seen in the geological record may be from either periods of wet weather or from dry conditions with the denuding of the landscape. Regardless, these erosional periods may explain at least some of the Middle Archaic stratigraphic profiles found within areas of the Piedmont.

PREHISTORIC AND HISTORIC SYNOPSIS

Previous Research

Relatively little work has been performed in Saluda County. Derting et al. (1991) shows only 27 surveys within the county. Almost all of the surveys represent compliance reports (for example Judge and Drucker 1987).

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I*. Figure 5 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P.[1], is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[2] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie 1992). They reveal a widespread distribution across the state (see also Anderson 1992b:Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Michie suggest that this may "imply a

[1] B.P. is "Before Present," with the present defined as 1950.

[2] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

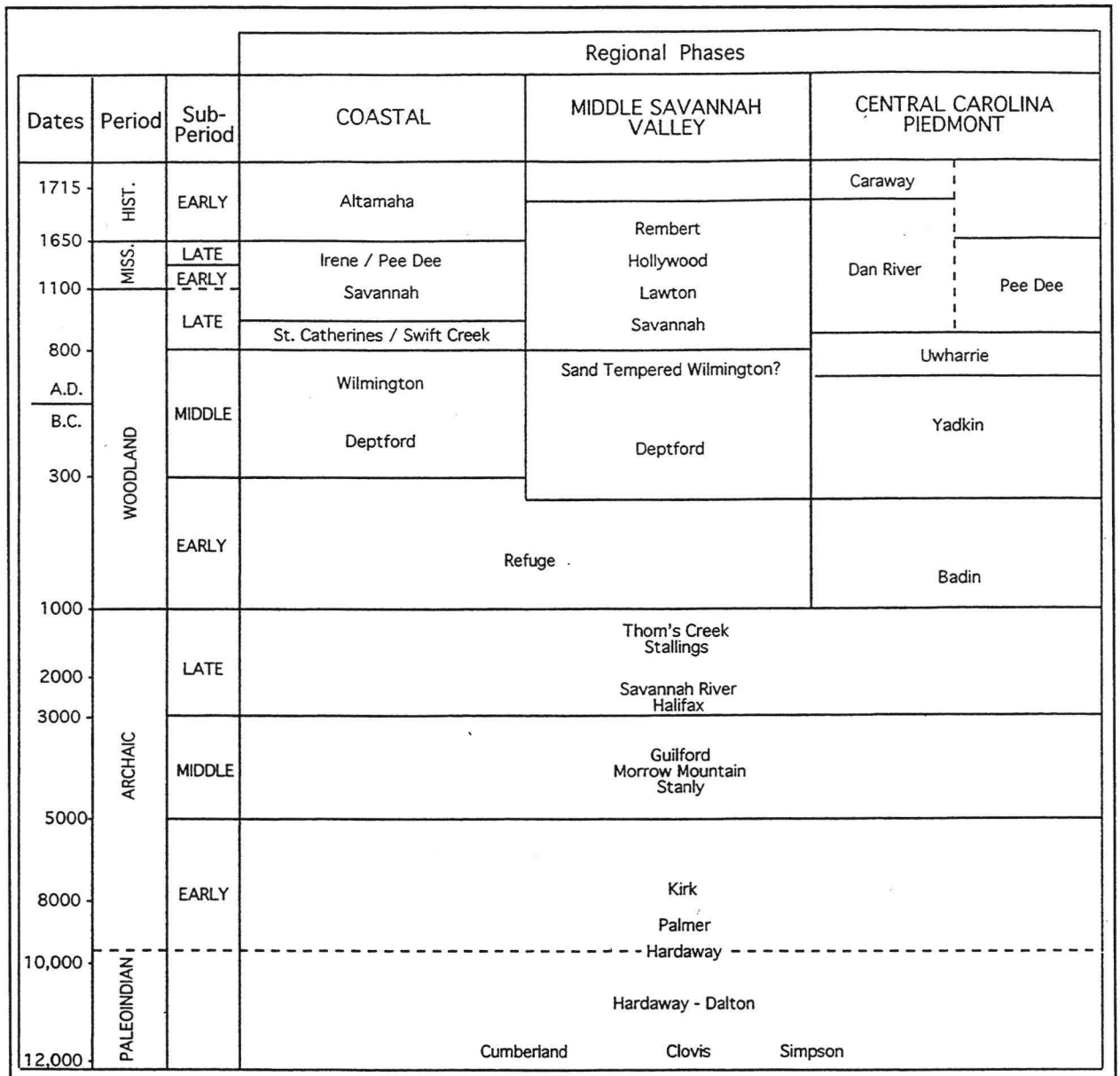

Figure 5. Generalized cultural sequence for South Carolina.

geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively more generalized band/microband foraging adaption" accompanied by increasingly distinct regional traditions (perhaps reflecting movement either along or perhaps even between river drainages) (Anderson 1992b:46).

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps

(1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[3], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.)

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[3] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately, is not well known.

diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point. Originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem, Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation. The original discussion was explicitly worded to avoid application of a typology, although as Sassaman and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major

alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a

discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. These sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included are Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery which is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sandhills and their association with coastal plain and piedmont types. The earliest pottery found at many sites may be called either Deptford or Yadkin, depending on the research or their inclination at any given moment.

The Deptford phase, which dates from 3050 to 1350 B.P., is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Inner Coastal Plain/Sand Hills, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98; see also Sassaman 1993 for similar data recovered from 38AK157).

Further to the north and west, in the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[4] This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

[4] The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there are "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

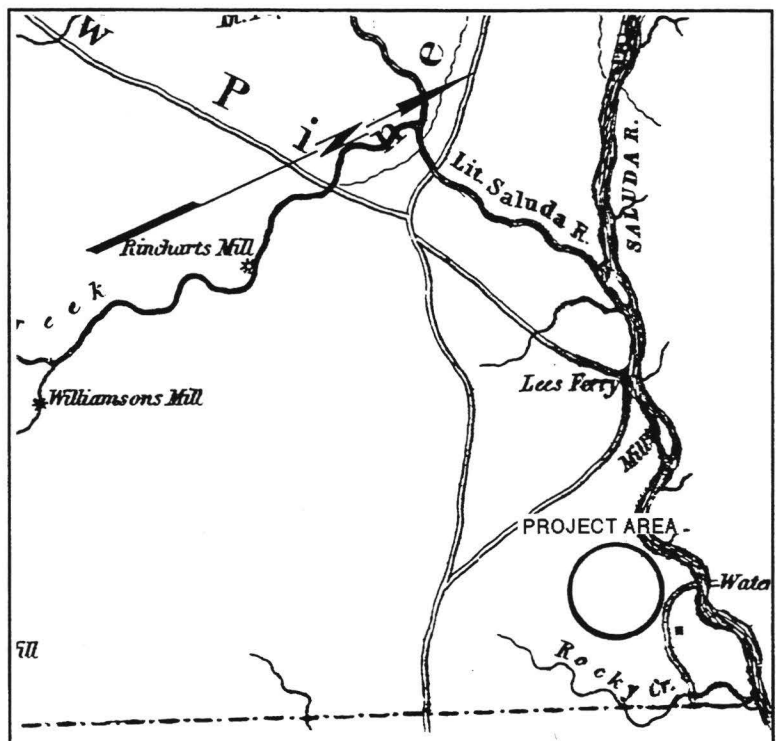

Figure 6. Portion of Mills' *Atlas* showing the project area.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historical Synopsis

Present day Saluda County was once part of the Ninety-Six District which was created in 1769 as one of seven districts in South Carolina (Long 1997). By 1800 the district was split to the creation of the Abbeville, Edgefield, Greenville, Laurens, and Newberry Districts.

The survey tract (presently in Saluda County) is in what is historically known as the Edgefield District. In 1826 Mills remarks that the district is historically similar to other nearby districts:

> There is nothing that distinguishes the settlement of Edgefield from that of other districts in the upper and middle country. They were all gradually settled as the tide of emigration rolled from the north and east. It however may be observed of this, in contradistinction to some other districts, which were peopled a good deal by foreigners, and their immediate descendants, (namely, by Irish, Scotch, and Dutch, mixed with a

> few English,) that Edgefield was settled principally, and indeed almost altogether, by emigrants from Virginia and North Carolina (Mills 1972:519-520 [1826].

Although exploration of the Savannah River Valley began as early as the sixteenth century (DePratter 1989), substantial settlement of the area did not begin until after the Yamassee Indian War (1715-1718). By the mid-eighteenth century, cattle ranchers and subsistence farmers cleared land and established small farms and plantations (Kovacik and Winberry 1987:69-71), and by the eve of the American Revolution, cattle ranching was well established in the area (Brooks 1981).

While Tory forces were quite active in the Edgefield District during the American Revolution, no skirmishes took place near the present survey area. From Charles Town, a direct route was established to the town of Ninety-Six, west of the survey area, which caused its evacuation in 1781 (Morrill 1993).

By 1800 the population consisted of 13,063 whites, 5,006 African-American slaves, and 61 free blacks totaling 18,130. In twenty years the population increased by about 7,000 with 12,864 whites, 19,198 slaves, and 57 free blacks, for a total of 25,119 individuals (Mills 1972:527, 664 [1826]). By 1850, the population had increased substantially. There were 16,252 whites, 22, 725 slaves, and 285 free blacks, totaling 39, 262. In the years preceding the Civil War, the population growth in the state slowed considerably, as planters and farmers left the exhausted soils of South Carolina and moved to Georgia, Alabama, and Mississippi (Kovacik and Winberry 1987:92-93).

Mills' *Atlas* (Figure 6) shows no names or structures in the project area. Waters Ferry is located north of the project area which crosses the Saluda River into Newberry County.

The Edgefield District saw some activity during the Civil War, although the area of present Saluda County was untouched. One of the closest campaigns involved General H.J. Kilpatrick of the Union Army who fought General Joseph Wheeler's troops at Blackville, Williston, and Aiken during his threat to Augusta (Wallace 1953:548). General Sherman's Savannah campaign also bypassed Saluda County on his way through Columbia, South Carolina (Glatthaar 1985).

It was not unit the end of the Civil War that nearby Aiken, to the west, came under attack. With the fall of Savannah, General O.H. Hill was placed in charge of the Confederate forces in Augusta, where it was thought that Sherman's troops would surely head in order to destroy the vast stores of cotton. By late January 1865 Union forces were rapidly advancing through South Carolina, having taken Pocotaligo on January 14th and breaking the Charleston-Savannah railway for the first time during the war. The Confederate forces established a defensive line near Three Runs in Aiken County, near where the Savannah River Plant site is today. The Union forces reached Allendale by the 31st and succeeded in taking Blackville, breaking the Charleston-Hamburg Railroad connection.

Union troops, including the 14th and the 20th Corps as well as Major General Hugh Judson Kilpatrick's cavalry, began following the railway line to the west, leading directly to Aiken. By February 10 Kilpatrick's cavalry reached Johnson's Turnout (at what is today Montmorenci), while the Confederate forces hastily established a line about two miles east of Aiken. Practicing total war, the country side was pillaged and the railway was destroyed. Kilpatrick remarked in a message to Sherman that "this is splendid country; plenty of forage and supplies" (quoted in Boylston n.d.:8). Efforts to advance through Aiken were foiled by Confederate troops under the command of General Joseph Wheeler. While Aiken was saved, as was the Graniteville cotton mill, and the stores of cotton in Augusta, South Carolina was lost.

Exhausted by war and stunned by the upheaval of their economic and social system the residents of Edgefield District, as well as the rest of the state, were in a state of confusion and hardship. Immediately after the Civil War cotton prices peaked, causing many Southerners to plant cotton again, in the hope of recouping losses from the War. The single largest problem across the South, however, was labor. While

some freedmen stayed on to work, others, apparently many others, left.

Table 1.
Systems of Tenure

	Share-Cropping	Share Renting	Cash Renting
Landlord furnishes:	land housing fuel tools work stock seed half of fertilizer feed for stock	land housing fuel ¼ or ⅓ fertilizer	land housing fuel
Tenant furnishes:	labor half of fertilizer	labor work stock feed for stock tools seed ¾ or ⅔ fertilizer	labor work stock feed for stock tools seed fertilizer
Landlord receives:	½ of crop	¼ or ⅓ of crop	fixed amount in cash or lint cotton
Tenant receives:	½ of crop	¾ or ⅔ of crop	entire crop less fixed amount

The hiring of freedmen began immediately after the war, with variable results. The Freedmen's Bureau attempted to establish a system of wage labor, but the effort was largely tempered by the enactment of the Black Codes by the South Carolina Legislature in September 1865. These Codes allowed nominal freedom, while establishing a new kind of slavery, severely restricting the rights and freedoms of the black majority (see Orser 1988:50). Added to the Codes were oppressive contracts which reinforced the power of the plantation owner and degraded the freedom of the Blacks. The freedmen found power, however, in their ability to break their contracts and move to a new plantation, beginning a new contract. With the high price of cotton and the scarcity of labor, this mechanism caused tremendous agitation to the plantation owners.

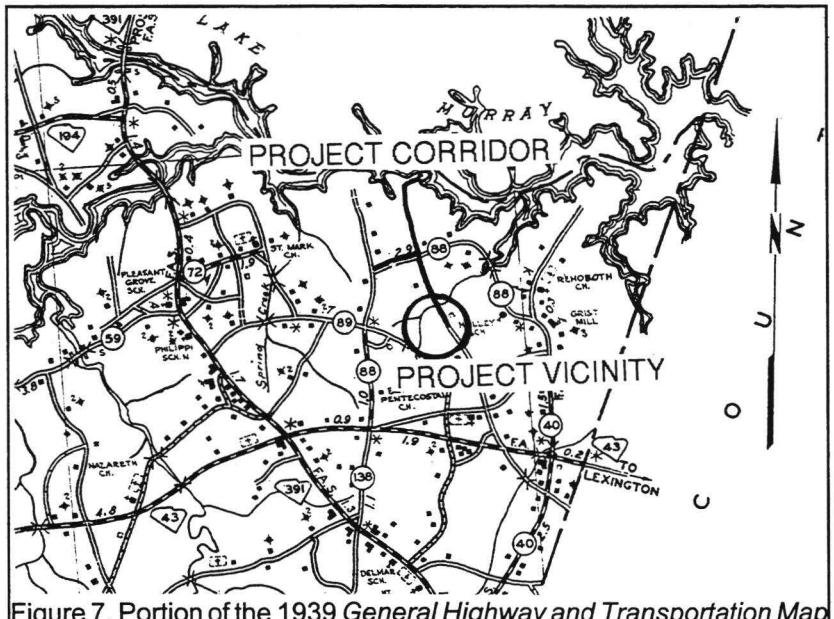

Figure 7. Portion of the 1939 *General Highway and Transportation Map of Saluda County* showing the study area.

Gradually owners turned away from wage labor contracts to two kinds of tenancy — sharecropping and renting. While very different, both succeeded in making land ownership very difficult, if not impossible, for the vast majority of Blacks. Sharecropping required the tenant to pay his landlord part of the crop produced, while renting required that he pay a fixed rent in either crops or money. In sharecropping the tenant supplied the labor and one-half of the fertilizer, the landlord supplied everything else — land, house, tools, work animals, animal feed, wood for fuel, and the other half of the needed fertilizer. In return the landlord received half of the crop at harvest. This system became known as "working on halves," and the tenants as "half hands," or

"half tenants."

In share-renting, the landlord supplied the land, housing, and either one-quarter or one-third of the fertilizer costs. The tenant supplied the labor, animals, animal feed, tools, seed, and the remainder of the fertilizer. At harvest the crop was divided in proportion to the amount of fertilizer that each party supplied. A number of variations on this occurred, one of the most common being "third and fourth," where the landlord received one-fourth of the cotton crop and one-third of all other crops. In cash-renting the landlord provided the land and housing, with the renter providing everything else and paying a fixed per-acre rent in cash.

In the 1880s Edgefield County had no cotton mills and none under construction, while Aiken County had three mills (Graniteville, Vaucluse, and Langley). Cotton was, however, being produced in large amounts and it was estimated that the average cost of producing merchantable cotton was about eight cents a pound and 40 dollars to bale 500 pounds. It appears that a large portion of the manufacturing in the county was milling grain or producing lumber and turpentine. Of the 84 manufacturing establishments there were 55 grist mills, 22 lumber mills, and 6 turpentine establishments (Anonymous 1884).

In 1896, Saluda County was created from Edgefield County.

The 1939 *General Highway and Transportation Map of Saluda County* (Figure 7) reveals no structures in the project area.

RESEARCH METHODS AND FINDINGS

Archaeological Field Methods and Findings

The initially proposed field techniques involved the placement of shovel tests at 100 foot intervals along transects placed at 100 foot intervals.

All soil would be screened through ¼-inch mesh, with each test numbered sequentially by transect. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1 foot or until sterile subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered. A total number of 108 shovel tests were excavated along 21 transects. Three additional tests were added in the wooded portion of the water lines.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 50 feet area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 to 50 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

These proposed techniques were implemented with no significant modifications. A series of 21 transects were established running primarily east to west along the existing roadway. Individual shovel tests were numbered to the north and south along these transects. The survey area was covered in a mixed pine and hardwood forest, with little ground visibility. The topography in this area was very steep with no distinct ridge tops and extensive soil disturbance. The water lines were located in the disturbed portion of the road right-of-way, but the northern portion of the line which was wooded and connected to Lake Murray was shovel tested. Since the water level of Lake Murray was lowered, the shoreline was also inspected for any archaeological material.

Sites would be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead agency in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

Analysis of collections would follow professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains.

Nevertheless, the archaeological survey of the project area failed to identify any archaeological remains. This is most likely to the steep topography and the lack of any distinct ridge tops.

Architectural Survey

As previously discussed, we elected to use a 1.0 mile area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950 and which retained their integrity. Those which have undergone such extensive modifications to preclude their eligibility were not recorded.

For each identified resource an architectural survey form would be completed and at least two representative photographs would be taken. Permanent control numbers would be assigned by the S.C. Department of Archives and History at the conclusion of the study. The site

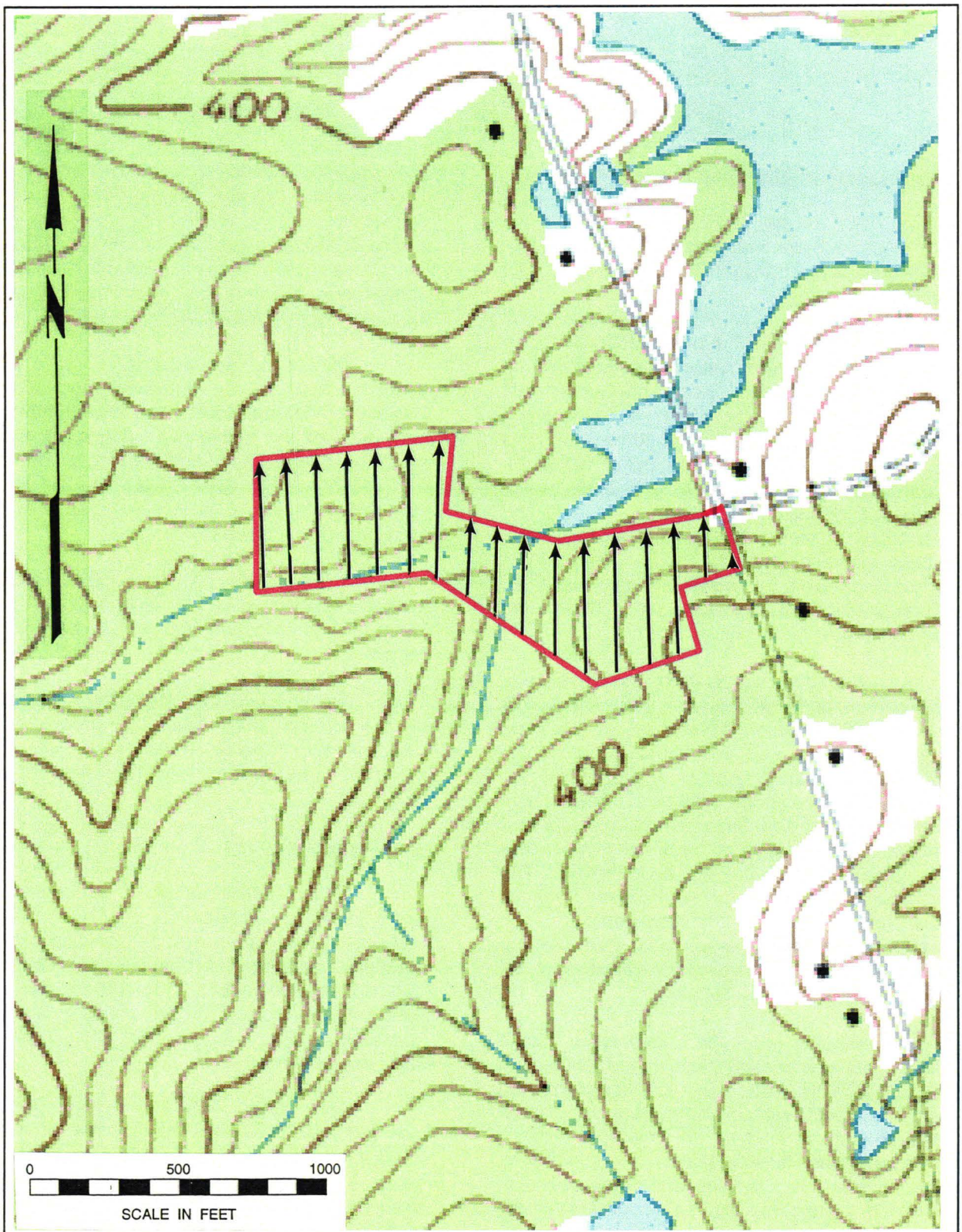

Figure 8. Survey area with transects.


Figure 9. View of Shealy Road to the north.

forms for the resources identified during this study would then be submitted to the South Carolina State Historic Preservation Office.

Site Evaluation and Findings

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or

sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site might be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.


Figure 10. View of the shoreline on Lake Murray.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on each archaeological site's ability to address significant research topics within the context of its available data sets.

The survey failed to identify any additional structures that were in the APE which contain enough integrity to be eligible for the National Register of Historic Places.

CONCLUSIONS

This study involved the examination of a 22 acre tract and approximately 2.6 miles of road right-of-way situated in northeastern Saluda County, South Carolina. The tract is proposed for the construction of a water treatment plant with the road right-of-way being used for a water line. This report, conducted for Mr. David DePratter of HSMM, provides the results of that investigation and is intended to assist the Saluda County Water & Sewer Authority comply with their historic preservation responsibilities.

The survey area consists of areas of mixed pines and hardwoods and wetlands which were dry at the time of this survey. The archaeological survey, which included close interval shovel testing, conducted at 100-foot intervals, revealed highly eroded soils and failed to uncover any archaeological sites.

The surrounding areas are still fairly rural with several small non-historic houses near the project area. Nevertheless, an APE 1.0 mile around the project area was examined, but no historic structures were identified which are intact and which appear to be potentially eligible for inclusion on the National Register of Historic Places.

It is possible that archaeological remains may be encountered in the area during construction. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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